

**REMARKS**

Upon entry of the present amendment, claims 7, 23 and 27 will have been amended to define the features of the present invention with greater clarity and specificity. Additionally, claims 10 and 15 will have been canceled without prejudice or disclaimer.

In view of the herein contained amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection together with an indication of the allowability of all the claims pending in the present application. Such action is now believed to be appropriate and proper and is thus respectfully requested.

In the outstanding Official Action, the Examiner rejected claims 7, 9 to 11, 14, 15, and 17-31 under 35 U.S.C. § 103(a) as being unpatentable over FROHBIETER (U.S. Patent No. 4,722,200) in view of MORRISSEY et al. (U.S. Patent No. 3,495,416) or KIM et al. (U.S. Patent No. 6,990,828).

Applicants respectfully traverse the outstanding rejection and submit that it is inappropriate with respect to the combinations of features cited in each of Applicants' claims. In particular, Applicants respectfully submit that no proper combination of the references relied upon by the Examiner teach, disclose, or render obvious the combination of features defining Applicants' invention as reflected in the claims pending herein.

Applicants' invention is directed to a refrigerator and includes freezing and cooling chambers, each of the freezing and cooling chambers configured to provide at least one space for receiving an article. Applicants' invention further includes an

evaporator and a cooling air transmitter that transmits cooling air that has been heat exchanged with the evaporator into each of the freezing and cooling chambers, the transmitter comprising a blower fan. A partition is provided to separate the freezing and cooling chambers, the partition being configured to define a predetermined space therein and to provide cooling air outlets to the freezing and cooling chambers, the evaporator and the blower fan being positioned within the predetermined space provided within the partition, the predetermined space defining a cooling air passage. A portion of the cooling air passage defined by side walls of the partition and above the blower fan is narrowed to increase a velocity of a stream of cooling air output by the blower fan to the freezing and cooling chambers. A diverter is positioned at a top of the cooling air passage to direct the cooling air into the freezing and cooling chambers, the diverter having a vertex facing the blower fan. The evaporator, the blower fan, and the cooling air outlets from the predetermined space to the freezing and cooling chambers are arranged in this order from a lower portion of the predetermined space and the cooling air outlets are symmetrically arranged about a rotation axis of the blower fan.

In setting forth the outstanding rejection, the Examiner asserts that FROHBIETER et al. discloses a refrigerator including the freezing and cooling chambers, an evaporator, a blower fan and a partition. However, the Examiner admits FROHBIETER et al. does not disclose outlets of cooling air that are symmetrical about a rotation axis of the blower fan. In this regard, the Examiner relies upon MORRISSEY et al. and KIM et al. to teach the symmetrical outlets of the cooling air to the freezing chamber and to the cooling chamber. The Examiner then concludes that it would have been obvious to one having ordinary skill in the art to modify the refrigerator of

FROHBIETER et al., in view of MORRISSEY et al. or KIM et al. such that the blower fan is provided so that cooling air outlets to the freezing and cooling chambers are symmetrically arranged about the rotation axis of the blower fan.

However, the Examiner has provided no logical reasoning to support this proposed modification of FROHBIETER. Moreover, Applicants respectfully submit that there is no logical reason for such a modification. In this regard, Applicants note that the partition wall in FROHBIETER is configured to be located externally outside of the insulated dividing wall 26 to achieve the disclosed purposes and goals of FROHBIETER. Thus, there is no logical reason to provide the cooling air outlets symmetrically about a rotation axis of the blower fan.

Applicants note that an explicitly disclosed feature of the FROHBIETER refrigerator is to provide an airflow that is segregated from the freezer cooling airstream and the airstream utilized to cool the remainder of the refrigerator fresh food compartment. Thus, it is an explicitly recited feature of FROHBIETER that a second segregated flow of air across a plate in thermal communication with the evaporator is provided to generate the segregated airflow for the chilled compartment. Adjacent to the evaporator 28, a transfer plate 50 is provided to achieve the above noted goal of the FROHBIETER invention. Accordingly, FROHBIETER has no need for symmetrical cooling air outlets and in fact modifying FROHBIETER in view of the teachings of either KIM or MORRISSEY would detract from the effectiveness of the FROHBIETER design in achieving the explicitly recited goal thereof.

Additionally, with respect to MORRISSEY et al., Applicants note that the blower fan and the evaporator are horizontally arranged which is in direct contradiction to the explicit recitations of applicants claims.

Yet additionally, Applicants' pending claims define the cooling air passage above the blower fan as being narrow in width to increase the velocity of the stream of cooling air output by the blower fan. It is respectfully submitted that not a single one of the three references relied upon by the Examiner teach this explicitly recited feature of Applicants' invention. Moreover, in the statement of the rejection the Examiner has not discussed or otherwise addressed this feature in any manner. For this additional reason it is respectfully submitted that Applicants' claims are clearly patentable over the combination of references asserted by the Examiner.

Furthermore, by the present amendment the claims have been amended to recite a diverter. However, again none of the three references relied upon by the Examiner teach this explicitly recited feature of Applicants claims. Moreover, given the structure of the primary reference relied upon, would it be no-obvious to one of ordinary skill in the art to provide such a diverter therein. Similarly, MORRISSEY et al. also does not provide a structure of a predetermined space within which one could effectively provide a diverter. Finally, KIM et al. clearly does not teach the utilization of such a diverter. Thus, none of the references relied upon by the Examiner teach this additionally explicitly recited feature of Applicants' claims.

Accordingly, because the Examiner has not set forth any logical reasoning evidencing the obviousness of the Examiner's proposed combination of references and the modification of the FROHBIETER device, and because no such logical reason exists,

as well as because several explicitly recited features of the present invention are not taught by any of the applied references, it is respectfully submitted that the Examiner's rejection asserted against the claims in the present application is inappropriate and improper.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection asserted against all the claims in the present application, in due course

## **SUMMARY AND CONCLUSION**

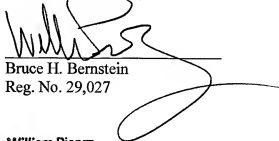
Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so. Applicants have amended the claims to even more clearly define the features of applicant's invention as well is to emphasize the distinctiveness of the present invention with respect to the cited and applied prior art.

Applicants have discussed the references relied upon by the Examiner and have pointed out the deficiencies thereof individually as well is in the proposed combination. Applicants have additionally discussed the non-obviousness of the Examiner's proposed combination based on the lack of a logical reason for such a combination. Applicants have discussed the disclosure of the references and pointed out the shortcomings thereof. Applicants have also discussed the recitations of Applicants' claims and with respect to such recitations have noted the shortcomings of the references with respect thereto. Accordingly, Applicants have provided a clear evidentiary basis supporting the patentability of all the claims in the present application and respectfully request an indication to such effect, in due course.

Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions or comments regarding this Response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
Moo Youl KIM et al.

A handwritten signature in black ink, appearing to read 'Bruce H. Bernstein', is written over a horizontal line. The signature is stylized and extends to the right.

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